Active Recombinant Human NQO1 protein, His-tagged

Cat. No. NQO1-138H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human NQO1 protein(P15559)(2-274 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	2-274 aa
Form	PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	NAD(P)H: quinone acceptor oxidoreductase 1 (NQO1), also known as DT-diaphorase, is a widely-distributed FAD-dependent flavoprotein that promotes 2-electron reductions of quinones, quinoneimines, nitroaromatics, and azo dyes. As a result it prevents the one electron reduction of quinones that results in the production of radical species. NQO1 is a highly-inducible enzyme that is regulated by the Keap1/Nrf2/ARE pathway. The increase and decrease of NQO1 levels are associated with decreased and increased susceptibilities to oxidative stress, respectively. Thus, NQO1 is a marker cytoprotective enzyme in oxidative stress. Independently of its catalytic function, NQO1 plays a role in regulating the proteosomal degradation of p53, p73a, and p33. NQO1 physically interacts with p53 and p73 in an NADH-dependent manner and protects them from 20S proteasomal degradation in a ubiquitin independent pathway. The activity assay of recombinant human NQO1 was measured by its ability to oxidize the substrate resazurin to resorufin. The rhNQO1

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	was diluted to 100 g/ml in the assay buffer 50 mM HEPES, 0.2 M NaCl, 5 M FAD, 0.05% Tween 20, pH 7.5. 50 µ100 g/ml rhNQO1 was added into the microplate and start the reaction by adding 50 µsubstrate mixture of 400 uM beta-NADH and 20 uM resazurin which was diluted in assay buffer. Read at excitation and emission wavelengths of 540 nm and 585 nm (top read), respectively, in kinetic mode for 5 minutes. The specific activity of recombinant human NQO1 is >18 pmol/min/g.
Molecular Mass	34.4kDa
Endotoxin	<1.0EU per 1µg (determined by the LAL method).
Purity	> 95%
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
Reconstitution	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	NQO1 NAD(P)H dehydrogenase, quinone 1 [Homo sapiens]
Official Symbol	NQO1
Synonyms	NQO1; NAD(P)H dehydrogenase, quinone 1; DIA4, diaphorase (NADH/NADPH) (cytochrome b 5 reductase) , NMOR1; NAD(P)H dehydrogenase [quinone] 1; DHQU; DTD; QR1; azoreductase; diaphorase-4; DT-diaphorase; dioxin-inducible 1; menadione reductase; quinone reductase 1; phylloquinone reductase; NAD(P)H:quinone oxireductase; NAD(P)H:quinone oxidoreductase 1; NAD(P)H:menadione oxidoreductase 1; NAD(P)H:Quinone acceptor oxidoreductase

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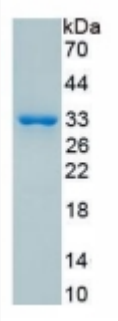
	type 1; diaphorase (NADH/NADPH) (cytochrome b-5 reductase); DIA4; NMOR1; NMORI;
Gene ID	1728
mRNA Refseq	NM_000903
Protein Refseq	NP_000894
UniProt ID	P15559
SDS-PAGE	
Activity	

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